winged insects quit the capituli on which they had been developed and seek to escape from the bell glass. He then inserted a fragment of poplar-bark under the bell, when the Aphides at once collected upon it and began producing sexual individuals. The same thing was done by individuals which had been allowed to fly and had collected on the window-panes. The poplars in the garden were at the same time covered with these Aphides.

In conclusion M. Lichtenstein calls attention to a possible objection to his experiment, viz. that he did not grow the *Filago* from seed under cover—and promises to remedy this defect next year.—*Comptes Rendus*, August 9, 1880, p. 339.

On the Ciliated Embryo of Bilharzia. By M. J. CHATIN.

The regularly oval egg of *Bilharzia* (*B. hæmatobia*, Cobb., the African Trematode parasite in the blood of man) presents no traces of striæ or flutings; but at one of its poles it bears a conical prolongation *. The segmentation of the vitellus takes place rapidly, and we soon witness the formation of an embryo of very characteristic aspect.

Clothed with a cuticle, from which innumerable vibratile cilia emerge, the young larva appears like an infusory contained within the egg, and the interior mass of which does not yet present any indication of differentiation; externally the contours become more strongly marked, and a sort of mamilla (proboscis) begins to indicate the future cephalic region. This general state usually persists until the period of exclusion †; and the latter is announced by various precurrent acts, into the details of which I cannot enter, and then makes itself plain by important organic modifications: beneath the proboscidian zone there is sketched out a cæcum, which plunges vertically into the somatic mass, and soon attains considerable dimensions; on its lateral parts appear secondary diverticula, which together form a rather complex whole, whilst at different parts of the body, and especially in the tegumentary layer, elegant vasculiform streaks ramify.

During this time phenomena of a very different kind appear towards the posterior extremity of the body; peculiar formations, generally spheroidal, begin to show themselves there, and increase rapidly in number and volume. Are we to see in these only "sarcode globules"? Such a hypothesis disappears before the application of a method rendered classical by important researches (Ranvier, Certes, &c.); the mode of grouping of the nitrogenous, glycogene, and fatty matters forbids our assimilating them to simple amœboid masses. It would seem that we may rather compare them to buds, which would thus originate in the interior of the embryo: their development even marks the term of its existence; for we soon see it become disaggregated to set free these bodies, which move, animated by rapid contractions, in the circumambient fluid.

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* In all the eggs that I have been able to examine, this prolongation was distinctly axial; but it is well known that Bilharz has described a second kind of ovules with the point lateral, in which, indeed, Sonnino even appears to find an indication of an actual specific duality.

† Sometimes, however, one can distinguish the first lineaments of the cæca even in the embryo still contained within the egg.

It will be seen that such results compel us to modify profoundly the signification which helminthologists assign to the ciliated embryo of *Bilharzia* in the cycle of development of that species. Its formation in the ovule as a consequence of a sexual act can alone explain the name of proscolex generally given to it; in reality its constitution evidences a superiority the reflection of which we should seek in vain among the different types of the class considered at this period. Far from being deficient, the internal parts are here represented by the cæca, in which we may see the first sketch of a digestive apparatus, and by that vascular ramification which drains the economy after the fashion of an excretory apparatus. By their mode of origin, as by their characters, the contractile corpuscles finally introduce an idea which is new and of high importance, since it enables us to bring together in the same stage the different evolutive states of the Trematode—a conclusion of which it is easy to foresee the importance in general morphology.—*Comptes Rendus*, September 27, 1880, p. 554.

Note on Argiope capsula.

By J. Gwyn Jeffreys, LL.D., F.R.S.

This tiny but remarkable Brachiopod has been lately found by my esteemed correspondent, Mr. Duprey, in Jersey, living at low water. It adheres by its comparatively short but stout byssus, in an upright position, to the underside of large stones which are sunk and partly buried in the sandy mud. Its companions are *Chiton scabridus*, *Rissoa striatula*, *Adeorbis subcarinatus*, and an apparently undescribed species of *Ascidia*. The fall of spring-tides in Jersey is equal to a depth of from 33 to 41 feet.

The specimens kindly sent me by Mr. Duprey are larger than any I had previously seen; and I was enabled to examine the inside of the shell by soaking them for some days in dilute potash water, together with specimens of *Argiope cistellula* of the same size. *A. capsula* has a thick hinge; and the smaller (though scarcely smaller) valve has a sharp-edged and wavy crest or ridge lying a little within the margin, which is heart-shaped and continuous in front. The shell is strong for its size, and is nearly spherical and equivalve, the beaks of both valves being excavated to contain the byssus. There is no trace of a septum in either valve. The cæcal tubercles are numerous, twice as many as in *A. cistellula* of the same size. The latter species is transversely oblong;